

Cobra Judy Replacement (CJR) - Ship Based Radar System

The Cobra Judy Replacement (CJR) is being built to replace Cobra Judy, whose end of service life is predicted to occur in 2012. Although the Air Force is the executive agent, the Navy is building CJR. CJR will transition from the Navy to the Air Force after Initial Operational Capability (IOC), scheduled for 2012.

Cobra Judy is an Air Force-managed program and uses a Military Sealift Command host ship manned by contract seamen. Contractors also operate and maintain the sensors. The host ship, built as a merchant vessel in 1952, is approaching the end of its service life making a host platform replacement necessary. In addition, the S-band radar on the ship is an early generation phased array design and is one of a kind.

Cobra Judy has been operating since 1981 as a one of a kind ship-based radar sensor system. The radars include a phased array S-band radar and a dish X-band radar. The system was designed or evolved to support three missions:

- Treaty monitoring and verification, including proliferation monitoring.
- Ballistic Missile Defense threat assessment and algorithm development.
- Technical data collection of performance assessment, radar signatures, and countermeasures.

The Services and Central Measurement and Signature Intelligence Organization are working to determine the replacement platform's requirements. Overall, the replacement system should provide at least the same capability as the current platform; in particular, the replacement system's S- and X-band radars must provide data of at least the same quality as that provided by the current system.

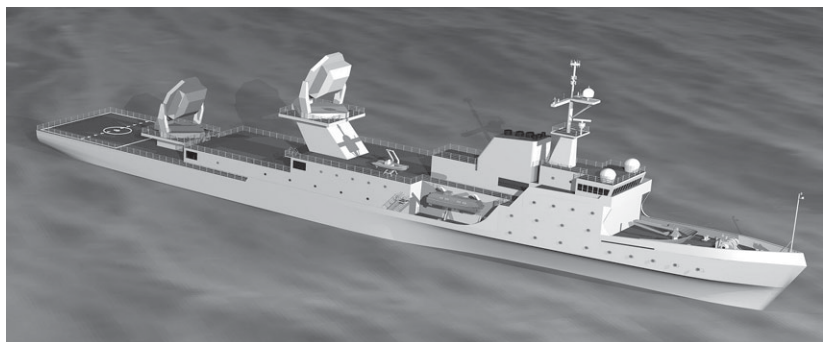
TEST & EVALUATION ACTIVITY

- Milestone A Acquisition Decision Memorandum was signed August 6, 2002, and designated the Navy as the acquisition agent.
- Milestone B/C occurred in September 2003. The Under Secretary of Defense, Acquisition, Technology and Logistics approved entry into System Development and Demonstration phase and Production phase with a requirement for a joint independent cost estimate submission in 2005.
- Air Force Operational Test and Evaluation Center (AFOTEC) is the lead operational test agency (OTA), with Operational Test and Evaluation Force (OPTEVFOR) as the supporting OTA.
- DOT&E approved the CJR Test and Evaluation Master Plan (TEMP) in September 2003.

TEST & EVALUATION ASSESSMENT

There are two significant issues with the CJR TEMP, which was co-written and approved by OPTEVFOR and AFOTEC, with final DOT&E approval. The first concerns using ballistic missile targets of opportunity for testing. In the future, the program may feel schedule pressure to conclude testing in a particular time frame, as opposed to when data has been gathered on a sufficient set of targets. A revised TEMP will include a statement that IOT&E is complete only when all testing events have been completed, instead of when a specific period of time has passed, and that IOC will not be declared until IOT&E is complete.

Since only one CJR system is planned and operational testing requires a production-representative test article, IOT&E will be done on the sole production article, after production is completed. In order to mitigate this risk, combined developmental



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NAVY PROGRAMS

test/operational test and operational assessment events should be conducted to evaluate the sensor systems, their sensor integration into the command and control and common operational picture architectures, and, finally, the sensor suite integration into the host ship.